REMARKS

It is desired to thank the Office for its helpful pointing out of informalities requiring correction in the specification and claims.

Applicants have followed the recommendations of the Office in expressly canceling claims 1, 2 and 21, and in providing proper amendments with bracketing, underlining, etc., to claims 3, 4, 10, 11, 13, 14, 20, 22, 24 and 30, as required. Applicants have also provided a clean version of the entire set of pending claims in their present form. Applicants have further overcome the informal objections in the disclosure by deleting the hyperlink notations and making the other typographical corrections required.

Applicants enclose the required copies for the references mentioned in the specification, as further requested by the Office.

The objection to claims 3-20 and 22-42 on informalities residing in typographical errors in the data rate limitations, and the accompanying 35 U.S.C. 112, first paragraph, rejection residing therein, have been overcome by correctly reciting in claims 7, 27, 31, 32 and 34 the proper data rate limitations--now specifying the limitation range suggested by the Office as "the data rates from hundreds to thousands of kilobytes per second and higher".

These objections and grounds of rejections have thus been obviated.

Since claims 3-20, 22 through 30, 36, 38 and 41-42 have not been rejected on prior art or on any other grounds, they and are thus presumably indicated as allowable.

Turning, however, to claims 31-33, 37 and 39, these have been rejected under 35 U.S.C. 103(a) as merely the "obvious" incorporation into the method of data hiding of *Tewfik et al* (U.S. patent 6,031,914), of data rate quantities suggested by the *Moskowitz et al* (U.S. patent 5,889,868).

The Office is correct in its belief that the system presented in *Tewfik et al* does embed data in frequency-domain coefficients, though it does not attain applicant's results as is evident from its limitation of being unable, for example, to extract the watermark from a media file without having access to the original document.

Applicants' invention has no such limitation, and its type of data embedding and extraction is capable of extracting embedded data, whereas only a potentially pirated signal as in *Tewfik et al* is available for analysis.

This aside, however, as the Office admits, the patent to *Tewfik et al* "does not teach embedding thousands of bits of the supplemental data at rates of from hundreds to thousands of kilobytes per second and higher" (page 6 of the Office action).

In the proposition to incorporate teachings of *Moskowitz et al* aggedly to supply such a concept, the Office can only point out that this reference, while suggesting an audio channel for hiding in music in ranges of "hundreds of kilobytes", fails to disclose any suggestion even of embedding thousands of bits of the supplemental digital data involved in applicant's concept and recited in claims 31 and 32 and in such hundreds of kilobytes per second of data rates.

Even more than this, considering that the system described in the patent to *Tewfik et al* does not even allow for the extraction of data from a watermark file without access to the original file, it would hardly be possible for one of ordinary skill in the art to propose some combination of the *Tewfik* and *Moskowitz* methods to result in these novel results of the present invention.

As for claim 33, the system of *Tewfik et al* is limited to embedding data in an individual set of DCT coefficients, whereas applicants' invention allows the set of coefficients used to embed the data with a parity technology at arbitrary sets of DCT--such as embedding spanning multiple blocks, quite unlike that in the patent to *Tewfik et al*. The disclosure in the patent to *Moskowitz et al* (6,332, 030), dealing with hiding speech in video, however, hardly supplies disclosure of the above deficiencies in the system of the patent to *Tewfik et al;* and similar remarks apply to claim 39.

Applicants' invention, moreover, is not restricted to any specific number of coefficients, even with regard to the 16-coefficient DCT used in J.P.E.G.

The above has demonstrated that neither the proposed incorporation of the data rate of *Moskowitz* et al or the mere use of groups of 16 coefficients of image data as in the *Mukherjee et a,l* provides any "obvious" anticipation of applicants' invention as

described in the system wording of claims 31, 32, 33, 37 and 39, such that these claims are also allowable and patentable.

Thus, as above shown, the proposed combination of bits and pieces of the secondary references into the system of the patent to *Tewfik* et al (which, as the Office concedes, is totally silent on applicants' range of thousands of bits of supplemental digital data and at the hundreds of thousands of kilobytes per second of data rates for any purpose at all) can hardly achieve applicants' purposes.

Apart from this, it is respectfully submitted that the Office obtained its "insight" to the proposed combination not from any actual teaching, suggestion, motivation of even hint in the system to *Tewfik et al*, but rather only from the teaching of the applicants' specification. This, it is submitted, is, however, an improper basis for an "obviousness" type of rejection.

As the Court of Appeals earlier cautioned:

> "the mere fact that the prior art could be so modified should not have made the modification obvious unless the prior art suggested the desirability of the modification". (In re Gordon, 221 USPQ 1125, 1127 (Fed. Cir., 1984).

And, more recently, in In Re Rouffet, 149 F. 3d 1350, 47U.S.P.Q. 2d 1453 (Fed.Cir. 1998):

> "...the suggestion to combine requirement stands as a critical safeguard against hindsight analysis and rote application of the legal test for obviousness."

And again in In Re Dembiczak, 175 F. 3d 994, 50 U.S.P.Q. 2d 1614 (Fed. Cir. 1999):

> "the insidious effect of a hindsight syndrome where that which only the inventor taught is used against the teacher."

The Court pointed out that, as in the present case, nowhere was there "any suggestion, teaching or motivation to combine the references" that might have served to support a proper obviousness analysis.

Reconsideration and allowance are accordingly respectfully requested: First, of the claims as to which the Office has not found anticipation in the prior art--claims 3-20, 22-30, 34-36, 38, and 40-42--; and, secondly, of claims 31-33, 37 and 39 as to which the rejection of "obviousness" is improper.

Any costs required by this filing, including for any required reply time extensions, petition for which is hereby made, may be charged to Deposit Account No. 18-1425 of the undersigned attorneys.

Very respectfully,

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